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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,985	10/02/2003	Kouji Nishizawa	520.43177X00	7791

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EXAMINER

TOY, ALEX B

ART UNIT	PAPER NUMBER
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3739

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

TJL

Office Action Summary	Application No. 10/675,985	Applicant(s) NISHIZAWA ET AL.	
	Examiner Alex B. Toy	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/675,985.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/02/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/675985, filed on October 2, 2003.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Surgical Forceps with a Plurality of Joints.

The abstract of the disclosure is objected to because it contains grammatical and idiomatic errors. Correction is required. See MPEP § 608.01(b).

A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because the current specification is replete with grammatical and idiomatic errors. For example, paragraph three consists of run-on sentences with unclear syntax and grammar such as: "For the instrument or tools locating at the tip ...", "requirement is made highly", "For dissolving such the drawback ...", and "which builds up the actuator, newly."

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter

must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 6, a "third guiding means" is specified, and the only reference to a "third guiding means" in the specification is a repetition of the claim language

verbatim. Therefore, the specification does not provide sufficient details to enable one skilled in the art to make or use the invention as claimed.

Regarding claim 7, "a middle of said wire" is not enabling because applicant has not defined what he regards as the entire wire length. Therefore, the examiner cannot determine what a claim to the "middle" means, and it would not enable one skilled in the art to make or use the invention as claimed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. All claims should be properly amended as the following errors are merely exemplary:

Regarding claim 1, "comprising" should be "comprises" in line 3.

Regarding claim 2, "a wire fixed at lest of one point thereof onto said guide means" is unclear and does not make sense.

Regarding claim 3, "thereof or thereafter" and "a wire for driving the joint locating nearer to said tip portion is guided to the joint on a side of the tip portion, passing through between said guide members owned by said joint" are indefinite and unclear in meaning.

Regarding claim 5, "said surgical tool portion can be separated from or connected to, between said driver portion and said surgical tool connection portion" contradicts Fig. 9 and does not make sense.

Regarding claim 12, "wherein said wire is wired passing through between said guide means" is unclear and does not make sense.

In general, for the purposes of examination, the examiner has attempted to interpret the claims and apply the relevant prior art as appropriately as possible.

In addition, claim 6 recites the limitation "said driving portion" in line 14. There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination it is assumed that "said driving portion" refers to the "driver portion" specified in claim 5.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohm et al. (U.S. Pat. No. 5,710,870).

Regarding claim 1, Ohm et al. disclose a manipulator 8 having a plural number of joints therein (Fig. 1), wherein at least in one joint of said joints comprises:

two pieces of rotating members 46 and 48, being disposed opposing to each other;

a driving means 54 and 56 for driving one of said rotating members 48 to make a rotating movement to the other 46 thereof (col. 5, ln. 31-35); and

a means 36 for keeping a distance between rotation centers 38 and 40 of said two pieces of rotating members 46 and 48 to be constant.

See Figures 2, 3, and 9-10.

Further, claim 1 invokes the means-plus-function language of 35 U.S.C. 112, 6th paragraph in claiming a means for keeping a distance constant. Therefore, claim 1 is interpreted to include any structures equivalent to the plates 10-12 (Figs. 1 and 2) that are described in the specification for performing the function claimed. See *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994). Thus, the side struts 36 of Ohm et al. anticipate the invention as claimed (Figs. 2 and 3).

Regarding claim 2, Ohm et al. disclose a manipulator in accordance with claim 1, wherein said driving means 54 and 56 has a guide means 50 and 52 attached on a rotation shaft 38 and 40 of each of said rotating members 46 and 48, and a wire fixed on at least one point thereof onto said guide means (Figs. 2 and 3).

Regarding claim 3, Ohm et al. disclose a manipulator in accordance with claims 1 and 2, wherein said joint is a second one 18 from a tip 12 (col. 4, ln. 46-52 and Fig. 1), and a wire for driving the joint 14 located nearer to said tip portion is guided to the joint on a side of the tip portion, passing through between said guide members 50 and 52

owned by said joint 18 (col. 10, ln. 21-41 and Fig. 1). This is shown in further detail in Figs. 4, 7, and 8 and col. 9, ln. 8-20.

Regarding claim 4, Ohm et al. disclose a manipulator in accordance with claim 1, wherein said rotating members are made up of at least one of the following:

a gear on a rotating portion of which are formed a plural number of teeth (col. 5, ln 39-41); or

a means having wire holding means disposed opposing to each other and two pieces of wire, each being fixed on said different wire holding means at both end portions thereof, while crossing said two pieces of wires with each other (col. 7, ln 1-11 and Fig. 6).

Regarding claim 12, Ohm et al. disclose a manipulator, comprising:

a joint having a first link 32 and a second link 34 therein;

a rotating contact means 46 and 48 for bringing said first and second links to rotate while being in contact with each other;

a guide means 50 and 52 for guiding a wire 54 and 56 at an equal distance from each rotation center 38 and 40 of said links when they rotate while being in contact with each other; and

said wire being guided by said guide means, wherein said wire is wired passing through between said guide means.

See Figures 2, 3, and 9-10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5-8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohm et al. in view of Ramans (6,206,903 B1).

Regarding claim 5, Ohm et al. disclose a manipulator comprising:

a surgical tool portion (col. 12, ln. 55-56, not shown);

a driver portion 28 for driving a surgical tool provided on said surgical tool portion (Figs. 1 and 14), wherein:

a surgical tool connection portion 10 is provided between said surgical tool portion and said driver portion 28, and said surgical tool portion can be separated from or connected to said surgical connection portion at 12 (Fig. 1). Ohm et al. do not expressly disclose a grip portion but specify that the device is capable of use with "all

types of tools" (col. 12, ln. 55-56). Since the device is capable of use with all types of tools, the device must be inherently capable of separating and connecting a tool at 12 in order to switch between different types of tools.

With regards to the specific language of claim 5, the invention would have no utility if the surgical tool portion were connected between said driver portion and said surgical tool connection portion. This arrangement makes no sense and contradicts Fig. 9 of the disclosure.

The claim differs from Ohm et al. in calling for the surgical tool portion to specifically have a grip portion. Ohm et al. do not expressly disclose a grip portion but specify that the device is capable of use with "all types of tools" (col. 12, ln. 55-56). Ramans, however, teaches a robotic surgical tool analogous to the invention of Ohm et al. with a grip portion 50 (col. 8, ln. 1-5 and Figs. 1 and 6-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the surgical tool portion of Ohm et al. to have been a grip portion in view of the teaching of Ramans because a grip portion or forceps is an obvious type of surgical tool that is well-known in the art.

Regarding claim 6, Ohm et al. disclose the manipulator of claim 5 in view of Ramans. In addition, Ohm et al. disclose a manipulator, wherein said surgical tool connection portion has a plural number of first guiding means 136a and 137a for guiding wires for driving a grip portion, wires being guided by means of said first guiding means, and a second guiding means 136b and 137b being formed with a pulley for holding a portion of said wires (col. 10, ln. 20-41 and Fig. 11). With regards to the claimed third

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guiding means, the specification is not enabling as stated in the preceding rejection of claim 6 under 35 U.S.C. 112, first paragraph. For the purposes of examination, Ohm et al. disclose driver portion 28, wherein said driver portion 28 has a third guiding means 224 being in contact with said second guiding means 136b and 137b via wires (not shown), and a driving means 220 for driving said third guiding means (col. 15, ln. 6-19 and col. 23, ln. 42-53 and Figs. 14 and 12).

Regarding claim 7, Ohm et al. disclose the manipulator of claims 5 and 6 in view of Ramans. In addition, Ohm et al. disclose a manipulator, wherein a tension detecting means is provided (col. 13, ln. 54-67). Since it is possible to achieve a desired preload tension, there inherently must be a tension detecting means. The claim differs from Ohm et al. in calling for the tension detecting means to be located indefinitely in a middle of said wire.

At the time the invention was made, however, it would have been an obvious matter of design choice to one of ordinary skill in the art to have located the tension detecting means in a middle of a wire because applicant has not disclosed that locating the tension detecting means in a middle of a wire provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the tension detecting means located anywhere along the wire because any arbitrary location along the wire would be able to perform the function of detecting the tension in the wire.

Regarding claim 8, Ohm et al. disclose the manipulator of claims 5 and 6 in view of Ramans. In addition, Ohm et al. disclose a manipulator further comprising means 206 and 210 for controlling an amount of pulling said wire by means of said driving means (col. 14, ln. 30-40 and Fig. 13).

Further, claim 8 invokes the means-plus-function language of 35 U.S.C. 112, 6th paragraph in claiming a means for controlling an amount of pulling. Therefore, claim 8 is interpreted to include any structures equivalent to the driver portion 62 (Fig. 9) that is described in the specification for performing the function claimed. See *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994). Thus, the UNIX workstation 206 and user interface 210 of Ohm et al coupled to the drive motors in the base anticipate the invention as claimed (Figs. 13 and 14).

Regarding claim 11, Ohm et al. disclose a manipulator comprising:

a surgical tool portion (col. 12, ln. 55-56, not shown);

a driver portion 28 for driving a surgical tool provided on said surgical tool portion (Figs. 1 and 14), wherein:

a surgical tool connection portion 10 is provided between said surgical tool portion and said driver portion 28, and said surgical tool portion can be separated from or connected to said surgical connection portion at 12 (Fig. 1). Ohm et al. do not expressly disclose a grip portion but specify that the device is capable of use with "all types of tools" (col. 12, ln. 55-56). Since the device is capable of use with all types of tools, the device must be inherently capable of separating and connecting a tool at 12 in order to switch between different types of tools.

Again, with regards to the specific language of claim 5, the invention would have no utility if the surgical tool portion were connected between said driver portion and said surgical tool connection portion. This arrangement makes no sense and contradicts Fig. 9 of the disclosure.

Ohm et al. disclose a grip portion provided on said surgical tool portion in view of the teaching of Ramans as stated in the preceding rejection of claim 5.

In addition, Ohm et al. disclose said surgical tool connection portion 10, wherein said surgical tool connection portion comprises a joint 18 for rotating said grip portion, wherein said joint has: two pieces of rotating members 46 and 48, being disposed opposing to each other; a driving means 54 and 56 for driving one of said rotating members 48 to make a rotating movement to the other 46 thereof (col. 5, ln. 31-35) ; and a means 36 for keeping a distance between rotation centers 38 and 40 of said two pieces of rotating members 46 and 48 to be constant.

See Figures 2, 3, and 9-10.

Further, claim 11 invokes the means-plus-function language of 35 U.S.C. 112, 6th paragraph in claiming a means for keeping a distance constant. Therefore, claim 11 is interpreted to include any structures equivalent to the plates 10-12 (Figs. 1 and 2) that are described in the specification for performing the function claimed. See *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994). Thus, the side struts 36 of Ohm et al. anticipate the invention as claimed (Figs. 2 and 3).

Allowable Subject Matter

Claims 9 and 10 are objected to as being dependent upon rejected base claim 5, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Pat. No. 5,549,636 to Li
U.S. Pat. No. 5,810,880 to Jensen et al.
U.S. Pat. No. 6,394,998 B1 to Wallace et al.
U.S. Pat. No. 6,554,844 B2 to Lee et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex B. Toy whose telephone number is (571) 272-1953. The examiner can normally be reached on Monday through Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AT *AT*
9/6/05

Michael Peffley
MICHAEL PEFFLEY
PRIMARY EXAMINER